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Introduction

The primary objective of the current study is to determine the degree to which social environment and stress variables such as work environment, family environment, and role conflict are related to various outcome variables for married and single parent female soldiers. The outcome variables of interest are well-being, job satisfaction, satisfaction with Army life, intent to remain on active duty, and attitude toward readiness for deployment. Furthermore, the degree to which social support moderates this relationship is examined.

In modern American society women have increasingly expanded their role as employee, while simultaneously maintaining their roles as wife and mother (Bianchi & Spain, 1986). Despite this transition, in dual-career households women continue to perform the greatest proportion of the household responsibilities (Pleck, 1985). A prominent theory is that women in multiple roles experience multiple stressors that cumulatively increase their risk of dissatisfaction and distress (Sorenson & Moriner, 1988). Numerous studies of civilian populations have examined the types of variables that influence various outcomes for women in multiple roles. Working wives and mothers who report experiencing substantial role overload (at work and at home) also experience the greatest amount of interrole conflict (Emmons, Beirnat, Tiedje, Lang, & Wortman, 1991). Furthermore, although husbands in this study shared almost equally in household tasks, the child rearing responsibilities fell disproportionately upon the wives/mothers. Perry-Jenkins, Seery, and Crouter (1992) found that women who were ambivalent about the meaning they attached to their various roles reported higher levels of depression and role overload. Longitudinal studies with women have demonstrated that interrole conflict predicts deterioration in marital satisfaction (MacEwen & Barling, 1988) and that changes in work environment predict changes in women's mental health (Barnett, Marshall, & Singer, 1992). In a study of Navy women, Kelly, Herzog-Simmer, and Harris (1994) found that during predeployment mothers experienced increased parenting stress and separation anxiety from their children, suggesting that this military demand increases psychological stress for these women. In sum, there is a body of research that suggests that the quality of the work and family environment, as well as interrole strain, relates to mental health functioning and life satisfaction of women.

Interestingly, several variables appear to moderate the relationship between negative work and home environment and well-being and satisfaction. In particular, social support appears to provide a buffer against the negative effects of stress (Cohen & Willis, 1985). Conceptualizations of how social support influences well-being/satisfaction vary, as do the definitions of social support (Hobfoll & Vaux, 1993). Generally, there is a consensus that in order to be effective, support must be appropriate to the stressor. Thus, the source of support (i.e., family, friends) may have a differential impact on individuals depending on the source of their stress; however, this area of study has not been thoroughly investigated.

Given the unique environment of the military organization, it is not known whether variables that are related to the well-being and satisfaction of married and single parent female soldiers are the same as those of their civilian counterparts. This study expands on prior research by examining those variables that have previously been found to be related to women's satisfaction and well-being utilizing a female military population. Furthermore, whether or not those same social environment and stress variables relate to potential retention and deployability are evaluated. Various sources of social support (family, friends, co-workers, and organizational) are examined to determine if they differentially moderate the effects of various sources of stress for these women. Finally, interview data is collected to elaborate on those factors perceived to be most strongly related to well-being, job satisfaction, retention, and deployability.

The study addresses the following questions for married and single parent female soldiers:

1. What social environment and stress variables relate to well-being, job satisfaction, Army life satisfaction, intent to stay on active duty, and attitude regarding readiness to deploy?
2. What amount of variance in each of the dependent variables (well-being, job satisfaction, Army life satisfaction, intent to stay on active-duty, and attitude regarding readiness to deploy) is accounted for by the social environment and stress factors?
3. Does social support moderate the relationship between the social environment/stress factors and the indices of well-being/satisfaction?

4. How do women who plan to stay on active duty differ in terms of social environment and stress from those who plan to exit the service?

5. How do women who perceive that they are ready for deployment differ in terms of social environment and stress from those who do not?

6. Are there unique aspects of these women's experiences in the military that can be identified for further exploration in future research?

Body

Participants. Two hundred female soldiers who are married, married with children, or single parents will serve as participants. The study is obtaining participants from three military sites: Walter Reed Army Medical Center, Ft. Meade, and Ft. Bragg. A cross-section of the married and single parent female soldier population is desired, and the demographic characteristics (i.e., rank, race) of the subjects has been monitored throughout the study to attempt to obtain a fairly representative sample.

Measures.

1. **Work Environment Survey.** This is a 25-item scale, modified from a longer version and specifically targeted for use with a military population. The alpha coefficient for this measure is .95, and it has been shown to relate to general job stress and psychological distress (Pan, Neidig, & O'Leary, in press). The scale generates a single factor score of perceived work environment.

2. **Work Change Events Survey.** This is a 9-item measure of work stress. The alpha coefficient is .76, and this measure correlates with work environment and psychological distress (Pan et. al., in press).

3. **Family Index of Regenerativity and Adaptation - Military (FIRA-M).** This is a measure developed by McCubbin and his colleagues to assess a variety of aspects of military family functioning (see McCubbin & Thompson, 1987, for review). The

measure generates six subscales: Family Changes and Strains, Self-Reliance Index, Family Index of Coherence, Social Support Index, Family Member Well-Being, and Family Adaptation Checklist. The internal consistency of each measure is adequate, ranging from .79 - .88. Furthermore, initial validation studies on active duty males suggest it is a valid measure. For completeness, the entire FIRA-M will be administered; however, the scales of primary interest are the Family Changes and Strains, Family Index of Coherence, and Family Member Well-Being.

4. Interrole Conflict Scale. This 8-item scale assesses the degree to which job and family demands conflict (Kopelman, Greenhaus, & Connolly, 1983). The scale has good internal reliability, discriminant validity, and convergent validity (Barling & MacEwen, 1988).

5. Maternal Separation Anxiety Scale. This 35-item scale generates three subscales based on factor analytic studies: Maternal Separation Anxiety, Perception of Separation Effects on the Child, and Employment-Related Separation Concerns (Hock, McBride, & Gnezda, 1989). Cronbach's alpha for each subscale ranges from .71 to .90. For completeness, the entire scale will be administered; however, for purposes of the current study the Maternal Separation Anxiety subscale will be utilized.

6. Survey of Perceived Organizational Support. The current study will use the brief version of the SPOS (Eisenberger & Huntington, 1986). The scale has good internal consistency ($\alpha = .93$), and construct validity has been established for both the original and brief version (Eisenberger & Huntington, 1986; Shore & Tetrick, 1991).

7. Perceived Social Support Scale. This scale generates two subscales: perceived support from family and perceived support from friends. The Cronbach's alpha is .90 and .88 for each subscale, respectively, and research has indicated that these scales measure valid constructs (Procidano & Heller, 1983).

8. Work Apgar Scale. This 5-item measure of coworker support was modeled after the Family Apgar Scale (Good, Smilkstein, Good, Shaffer, & Aarons, 1979). No specific psychometric information is available for this scale.

9. Job Satisfaction Scale. This brief measure of overall job satisfaction has been shown to be internally consistent ($\alpha = .78$) and related to work environment (Emmons, et. al., 1990).

10. Army Life Satisfaction. This 11-item scale was developed by researchers at Walter Reed Army Institute of Research. Although published literature regarding its psychometric properties is not yet available, it reportedly has adequate reliability and validity indices (personal communication, Dr. Leora Rosen, WRAIR, 1994).

11. Beck Depression Inventory. The BDI assesses an individual's current state of distress and depressive symptoms. Nietzel, Russell, Hemmings, and Gretter (1987) report that the measure has good internal consistency, test-retest reliability, and concurrent validity.

12. Intent to Remain on Active Duty. Subjects will respond to a three items assessing a) their intent to remain on active duty until retirement, b) their intent to remain on active duty for the next five years, and c) their desire to get out of the Army as soon as possible.

13. Attitude Toward Deployability. Subjects will also respond to a several items assessing their attitude toward deployment.

14. Supplemental Questionnaire. A questionnaire was specifically devised for use in this study to explore unique facets of the military work and home environment that were not deemed to be assessed adequately with other measures. These items will be used for exploratory analyses.

15. Structured Interview. A structured interview was also constructed specifically for use in this research project. It attempts to allow the female soldiers interviewed to give more open-ended responses regarding their experiences in the military, and may provide information to guide future research projects aimed at assessing this unique population.

Procedure. Participants have been obtained from the three military sites previously indicated. Subject participation has been solicited through briefings or flyers distributed by the investigators to various units, and participation has been completely voluntary. Command support at each base has been obtained prior to conducting the study. Approximately 120 married and single-parent female soldiers have participated in completing the study questionnaires administered by research

project personnel in a group format. An additional 80 participants are desired and solicitation of participants is continuing. To date, 19 of the subjects have also completed a brief structured interview to obtain more open-ended perspectives on their experiences in the Army and address unique aspects of their military experiences. These interviews were also conducted by research project personnel and have been audiotaped for scoring and analysis. Given the complexity of the current research project, a subject matter consultant with expertise in research and data analysis is collaborating on the research project.

Data Analysis.

The relationship between the variables assessed will be examined by computing a correlational matrix.

To examine the amount of variance in each dependent variable attributable to the predictor variables a series of multiple regression analyses will be conducted. The Job Satisfaction Index, Well-Being Index, Army Life Satisfaction Index, Intent to Remain on Active Duty, and Attitude Toward Deployment will serve as dependent measures with the Work Environment Scale, Work Stress Scale, Family Change and Strain Scale, Family Coherence Scale, Interrole Conflict Scale, and Maternal Separation Anxiety Scale (for mothers only) will serve as predictor variables.

Subsequent to the above analyses, the social support measures (Survey of Organizational Support, Perceived Social Support-Family, Perceived Social Support-Friends) will be included in the multiple regression analyses to examine the degree to which social support moderates the relationship between social climate/stress and satisfaction/well-being.

In order to determine the way in which women who intend to stay on active duty differ from those who intend to exit the service, the subjects will be divided into two groups based on their responses to the item assessing this intent. Multivariate analyses will then be conducted on the social climate and stress variables to assess if there are differences between the two groups. A similar analysis will be conducted by dividing the sample based upon their attitude toward deployment.

The supplemental questionnaire will be analyzed by determining the percentage of female soldiers who are dissatisfied/satisfied with various aspects of Army life

assessed, as well as identifying those items that are frequently endorsed as dissatisfying/satisfying. Further multivariate analyses could determine whether these items discriminate among female soldiers who are distressed and dissatisfied from those who are not. The interview information will be evaluated by identifying trends in responses among the soldiers and assessing whether these trends relate to the other variables assessed.

The questionnaire data collected to date has been coded and input into a database, and a coding scheme for the interview data has also been developed. Complete data analyses will be completed upon collection of data from all participants.

Conclusions

Upon completion of the current project, the results are hypothesized to have several potential applications. First, this information can aid military mental health workers in developing prevention and intervention programs that target particularly stressful or dissatisfying factors for female soldiers. Second, the information can sensitize commanders and others in positions of leadership regarding the experiences of female soldiers, and can be utilized to implement strategies and programs that target vulnerable areas that could potentially impact positively upon well-being and satisfaction, and increase the level of retention and deployability, of female soldiers. Finally, the information can provide guidance for the Army as an organization in the development of policies that impact positively upon female soldiers.

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